Demographic Trends of College Students Today & Tomorrow: How Do We Entice Them to Use the Academic Library?

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Abstract

Profound challenges lie ahead for US higher education. Population analysis shows that shifting student demographics may prove to be the most formidable change ever for American colleges and universities. Millennials, America's newest generation, are the most ethnically and racially diverse cohort of youth in the nation's history—called "digital natives", the first in human history to regard behaviors like texting, along with mobile phones and social media usage, not as extraordinary inventions of the modern era, but as everyday parts of their lives. Who are our future college students? How do we tailor library services to meet their needs?

Introduction

As stated by Lippincott in *Educating the Net Generation*, "there is an apparent disconnect between the culture of library organizations and that of Net Gen students" (*Net Gen Students and Libraries* 13.1). Although academic libraries have continually updated their content delivery platforms, their reference presence, and even their hours to accommodate students' service preferences over the past thirty years, we are barely keeping pace with the information-seeking behaviors of college freshmen as the Internet and other advanced technology have become omnipresent in our students' lives.

Most historians agree there are several distinct generations that were born in the US during the twentieth century. Among them are included: the Baby Boom Generation (1946-64), Generation X (1965-81), and the Millennial Generation (1982-2003). Although the spans for each generation are not definitive, the cutoffs usually differ by only a year or two. These generational groupings share common formative life experiences and other distinctive identity features. ("Generations and Generational Conflict") While earlier generations learned to use information through print, Millennials and those born since have taken a digital path. For the purposes of this paper, we will use the collective term "Next Gen" when referring to Millennial and post-Millennial generations, the group of students 29 years old or younger.

Next Gen students in the US are the most diverse cohort of youth in the nation's history (*Knocking at the College Door* 25). Major aspects of these rapidly changing demographics that impact Next Gen students' use of academic libraries is that there will be many more freshmen who are immigrants or children of immigrants who do not speak English at home, or who are the first in their families to attend college (Asher, Case, and Zhong 264), or who are experiencing economic

difficulties (Hamilton and Marcus). Other characteristics prevalent in the literature about Next Gen students are that they lack college readiness and that many of them grew up not seeking information in a library setting, whether at their local public library or their K-12 school libraries (Flores and Pachon 7, Adkins and Hussey 461). Conversely, many of these students are considered "digital natives" and are the first generation to regard behaviors like texting, mobile phones, and social media usage as everyday parts of their lives (Lenhart et al. 9). These technology-inherent learners are used to group-work, multitasking, and figuring things out for themselves (Lippincott, *Net Gen Students and Libraries* 13.2). How do we tailor library services to meet all these divergent information needs?

Is the dichotomy between the expectations of the academic library creators (i.e., librarians) and the service users (i.e., students) too great a hurdle to overcome? According to recent ALA demographics studies, over 70 percent of ALA's membership are librarians 35 years of age or older, predominantly of the Baby Boom Generation (50%) and to a lesser extent Gen X (20%). The mindset characteristics of older generations are quite different from those of Next Gen. As far as diversity, an earlier ALA report, *Diversity Counts*, states that, "if libraries are to remain relevant they must be willing to not only reach out to diverse user communities but to build a workforce reflective of that diversity" (Davis and Hall 4).

A scrutiny of the demographics of Next Gen students should benefit academic librarians by improving their understanding of the mental models of current and future college students. This will in turn hopefully enable librarians to design offerings that will entice students to use library services to the fullest extent possible and equip those students with the best resources in their research arsenal, so they are better able to succeed in higher education and beyond.

Student Demographic Trends

Current Enrollment Trends

During the second half of 2010, the *Chronicle of Higher Education* published a series of charts in the *Almanac of Higher Education 2010*, using data from the US Department of Education (DOE) and the University of California at Los Angeles (UCLA) Higher Education Research Institute (HERI).

The *Chronicle* analyzed the data and looked at enrollment growth over a span of 11 years, from 1998 to 2008. Looking at race/ethnicity in postsecondary education, they found that the overall amount of growth in enrollment occurred as follows (see fig. 1).

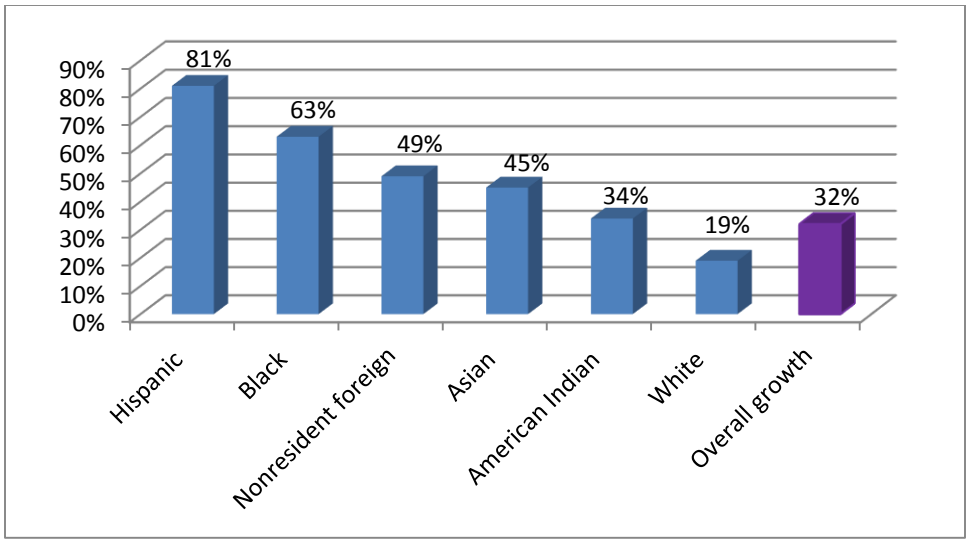

Fig. 1. Higher Education Enrollment Growth by Race/Ethnicity, 1998-2008
Source: *Almanac of Higher Education*.

In looking at different characteristics of freshman of 4-year institutions, UCLA's HERI surveyed freshman in 2009 about their demographic characteristics and their opinions towards college and learning. These freshmen were mostly age 18 (68%), spoke English as their native tongue (92%), and were white (73%).

Several of the data points were compared to a 2004 survey asking most of the same questions. More students indicated in 2009 than in 2004 that their mothers or fathers were unemployed, that they were going to use loans, and that they were concerned about paying for school. The majority of freshman indicated that one factor in their school selection was that the school's graduates get "good jobs".

The freshmen in the 2009 survey, in responding to questions about their approach to learning, indicated that most took notes during class, studied and worked with other students on assignments, asked questions during class, and accepted mistakes as a part of the process of learning. Only about a third of the respondents indicated that they evaluated "the quality of reliability of the information" they received or looked up scientific research articles and resources. Most believe they will make at least a 'B' average. (*Almanac of Higher Education*)

Future Enrollment Trends

In March of 2011, DOE's National Center for Education Statistics (NCES) updated their annual report, *Projections of Education Statistics to 2019*. Analysis of NCES data shows that from 1994 to 2008 (the last year of actual data available) total enrollments in the nation's degree-granting institutions increased 34 percent (slightly higher than the 1998-2008 figure mentioned previously) and additionally total first-time freshmen enrollment increased 42 percent over the same 14-year period. This upward trend is expected to continue and projections indicate that over the next 11 years there will be a further increase of 17 percent—to 22.4 million students by 2019.

Between 2008 and 2019, specific demographic details within NCES's projections, show that enrollment numbers are likely to increase:

- 12 percent for students who are 18 to 24 years old; 28 percent for students who are 25 to 34 years old; and 22 percent for students who are 35 years old and over.
- 12 percent for men; and 21 percent for women.
- 17 percent for both full-time and part-time students.
- 16 percent for undergraduate students; and 25 percent for post-baccalaureate students.
- 13 percent overall for first-time freshmen (within this grouping, 8 percent for men and 18 percent for women).
- 5 percent for students who are American Indian or Alaska Native; 7 percent for students who are White; 30 percent for students who are Black; 30 percent for students who are Asian or Pacific Islander; and 45 percent for students who are Hispanic.

Using NCES data, the Pew Research Center further elucidated several trends among first-time freshmen enrollees in the report entitled, *Minorities and the Recession-Era College Enrollment Boom*. A record 2.6 million first-time, full-time freshmen were enrolled in the nation's degree-granting institutions in fall 2008. This represents a 6 percent increase—or 144,000 more freshmen—over the 2007 freshman class and the largest since 1968. The Pew Research Center researcher attributes this phenomenon to two factors. The first factor is that the nation's high school graduating class in 2008—at 3.3 million—is estimated to have been the largest ever. The second factor is that record rates of high school graduates are immediately enrolling in college. In October 2008, 68.6 percent of high school graduates were enrolled in college in the fall immediately after completing high school. This trend occurred again in October 2009 when a record 70 percent of high school graduates immediately entered college in the fall after their graduation. This is a historical high for the data series, which began in 1959.

Interestingly, around three-quarters of the freshman enrollment boom is due to minority freshman enrollment growth, which reflects the changing demographics of the nation's high school graduating classes. Also, the boom was highly concentrated in a limited number of states—California alone accounts for 35 percent of the nation's total freshman enrollment increase from 2007 to 2008. Other heavily Latino states—specifically Arizona, Nevada, and New Mexico—also experienced above-average growth in freshman enrollment. (Fry 10)

Information-seeking Behaviors of Next Gen Students

How do Next Gen college students seek information? How do students conduct research for academic assignments? Because of growing up in the digital age, and being continuously connected to the Internet, do they exhibit generational styles that are markedly different from previous generations?

According to the seminal book, *Born Digital: Understanding the First Generation of Digital Natives*, by Palfrey and Gasser:

> Digital Natives are coming to rely upon this connected space for virtually all of the information they need to live their lives. Research once meant a trip to the

> library...Now, research means a Google search—and, for most, a visit to Wikipedia before diving deeper into a topic. They simply open a browser, punch in a search term, and dive away until they find what they want—or what they thought they wanted. (6)

Prensky postulates that children and teenagers raised with a computer actually think differently from adults; their cognitive structures work in parallel, rather than sequentially as older generations were taught to do. He states that educational systems have traditionally been dominated by linear thought processes that may slow down learning for Next Gen students who are used to action-packed videogames, 30-minute TV shows, and surfing on the Internet. He says, "our children are out furiously retraining their brains to think in newer ways, many of which…are antithetical to older ways of thinking" (3).

Overwhelmingly, it has been shown in study after study that a majority of college students turn to the Internet first for research (Biddix, Chung, and Park 180). Because many students are over-confident of their searching skills (Holman 24) and unaware of the personalization aspects of Google, they do not realize that their search results are being ranked for relevancy based on cookies and/or other IP-based information gathered by the search engine. (Pariser)

Numerous studies stated that Next Gen students tend to be less discriminating in the sources they use; they often scan materials for what they are seeking instead of reading an entire article; they value convenience and ease-of-use over quality; and although they appear confident in their information-seeking abilities, they lack sophistication in structuring their searches and fail to realize there are better sources they could be using to find more targeted answers.

Other studies have found that students utilize simple keyword searches that often contain misspellings or incorrect logic. They prefer to utilize natural language search strings in a single, simple interface that doesn't allow for more complex search strategies and that automatically corrects spelling mistakes. Because of their lack of in-depth reading of materials, students rarely modify the searches they conduct and tend to utilize only those links in the first few pages of results.

Barnes and Peyton state that, in addition to their preference to search for information first and foremost on the Internet, students also want to access information when and how they choose, usually not inside the library; they expect access to all information in a variety of formats at all hours of the day. They appreciate feedback from others as long as it's not condescending and "they enjoy learning through stimulating, hands-on activities and through collaboration." Undergraduate students appear to want to waste as little time as possible and so have zero tolerance for any delays, because they are so habituated to instantaneous connection and technology.

In a huge, multi-institutional study by Head and Eisenberg in 2009, the researchers concluded that students were "challenged, confused, and frustrated by the research process." The most difficult part of research for them was "figuring out how to traverse complex information landscapes" and that students were frustrated in locating materials they wanted or even knew existed. (13)

Next Gen Service Recommendations

Given the demographics of the college student today and tomorrow, how do we entice them to use the library's services? In an age of ubiquitous information, how do academic librarians adapt and improve the library's services to stay relevant and necessary? The good news is that college libraries are regarded as trustworthy and valuable by students (De Rosa et al. 54). The hurdles to information access can be lowered by increasing the seamlessness between the sources that students turn to on a regular basis (Google and Wikipedia) and the library's content in academic electronic resources. Librarians can help their students discover their library's resources by signing up for Google Scholar's Library Links and/or Library Search programs which are both available at no cost. Libraries have made progress in adapting to the changing technological wishes of Next Gen users by adapting reserves and reference services into virtual formats. Some libraries have adopted an "information commons" model of physical space that allows for group collaboration, technological experimentation, and new pedagogical applications (Lippincott, *Info Commons: Meeting Millennials' Needs*).

Librarians can also enhance their class pages by creating specialized pages with embedded resources in the course management software (CMS) utilized by their institution. Take time to communicate with faculty and use their input to create interactive tutorials and pathfinders for use on CMS pages, so that students can view training videos and other multimedia on their own time and at their point of need introducing subject-specific resources and resource-specific search strategies. Providing ready-made CMS modules will be a boon to faculty looking to include information literacy in their courses, and will save time for students who will not need to remove themselves from coursework to find relevant information.

Given that mobile phone penetration among young adults (aged 18 to 34) is higher than that of all US adults (95% versus 85%) (Zickuhr 1) and teens have a "deep comfort level with [their] mobile phones" (Docksai 11), the academic library should be providing mobile access to information about the physical collection as well as full access to all electronic resources within their virtual collection. Through both the mobile and traditional portals, the library's website and Online Public Access Catalog (OPAC) should be re-designed to be visually appealing, intuitive, and utilize Web 2.0 technologies (wikis, blogs, RSS feeds, podcasting, virtual reference services, federated searching) to encourage community building and online social media interactivity.

To accommodate increasingly prevalent student smartphones, Quick Response (QR) codes could be incorporated throughout the physical library to link to virtual resources with additional information to deliver context appropriate help. Examples of using QR codes include: linking to scheduling software to reserve a room; ringing a phone number within the library to provide phone reference support; starting a text message for interaction with the text-a-librarian service; providing or importing contact details for a librarian or library staff personnel that are not at their desk; creating a scavenger hunt; storing information for future reference; providing links to e-journal backfiles when the print copy is shelved in remote storage; and enabling your OPAC to generate QR codes to allow students to scan and locate a physical resource. In short, basically anytime that automatic entry can replace manual keying of information on a student's phone to save time and effort. (Ashford)

A concerted effort to reflect the diverse demographics of our students in academic librarian staffing is essential. The tables below show the race, gender, and age distributions of academic librarians during the new millennium (see tables 1 and 2). Statistics from a variety of sources support the long-held stereotype that librarianship is filled with white women, but in looking at the changing demographics of the Next Gen students, one can see a vital need for a more diverse group of professionals. Further study should be done to note what languages are spoken by our incoming students as compared to languages spoken by our librarians.

Table 1 Percentage of Higher Education Credentialed Librarians by Race/Ethnicity, 2000

Race/Ethnicity	2000
White	85.6
Black	4.8
Latino	1.5
Other	8.1

Table 2 Percentage of Higher Education Credentialed Librarians by Gender and Age, 2000

Characteristic	2000
Female	69.9
Male	30.1
Under 35	12.5
35-44	22.6
45-54	39.9
55-64	20.5
65 or older	4.5

Source: Godfrey and Tordella 12 and 28.

Instruction sessions cannot be uniform any longer. Large demographic shifts in undergrads require the application of different pedagogies to reflect many different learning styles. Librarians should adjust their instruction sessions to work on specific research topics and not utilize simply a blanket information literacy course at the beginning of the semester. Group work is to be encouraged, but perhaps an adaptation of instruction style could benefit the technologically-capable Next Gen student. Both the Fairfield University library's *Library Scene: Fairfield Edition* (ACRL's March 2011 PRIMO Site of the Month) and the Massachusetts Institute of Technology *Environmental Detectives* were created as bibliographic instruction computer games that are effective at teaching critical thinking in group settings (Lippincott, *Net Gen Students and Libraries* 13.7). To serve the growing number of distance education students, an online instruction session would be optimal. One method might be to have a virtual scavenger hunt that can be used both on- and off-campus.

This is but a cursory glimpse into the demographics of Next Gen college students, and possible methods by which to understand and serve them. The tectonic changes in demographics and technological savvy of students our academic libraries are serving are well worth our attention. Librarians need new skill sets and a willingness to adapt in order to incorporate new services and pedagogical schemes for our future students.

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